

## A New *Systropus* from Taiwan and Japan (Diptera, Bombyliidae)

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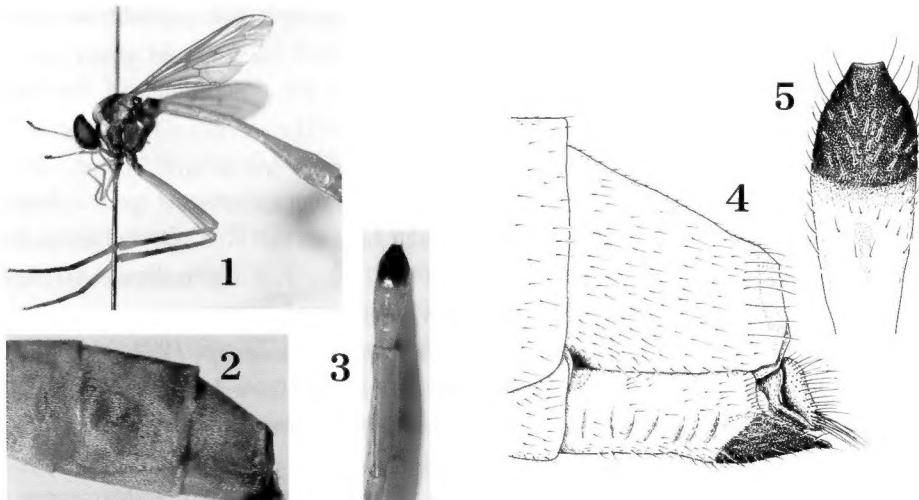
### Abstract

One species of *Systropus* distributed in Taiwan and Japan is here named *liuae* as new to science. This species was described as *Systropus* sp. C based on only male specimens in NAGATOMI *et al.* (1991). Recently 6 males and 3 females of this species have been found in Japan and its identity has been confirmed.

Key words: Diptera, Bombyliidae, *Systropus*, one new species, Taiwan and Japan

### Introduction

In NAGATOMI *et al.* (1991), *Systropus* sp. C was described and illustrated but was thought to be possibly identical with *Systropus formosanus* (ENDERLEIN, 1926). The female of sp. C was unknown at that time. Based on three female specimens recently collected in Japan, sp. C is named *liuae* as new to science.



Figs. 1-3. *Systropus liuae* sp. nov. (= sp. C in NAGATOMI *et al.*, 1991), 1, lateral view; 2, apical portion of abdomen, lateral view; 3, apical portion of abdomen, ventral view.

Figs. 4-5. *Systropus liuae* sp. nov. (=sp. C in NAGATOMI *et al.*, 1991), 4, abdominal terminalia, lateral view; 5, apical portion of sternum 8, ventral view.

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***Systropus liuae* sp. nov. (Figs. 1-5)**

*Systropus* sp. C, NAGATOMI, LIU, TAMAKI and EVENHUIS, 1991, South Pacific Study, 12: 105. Distribution: Taiwan and Japan (Honshu). Japanese name: Taiwan haraboso tsuriabu.

The description and illustrations of this species were given as *Systropus* sp. C in NAGATOMI *et al.* (1991) and are not repeated here. The female was unknown in the past but there are 3 female specimens now on hand. Except for genitalia, no significant difference is seen between male and female.

The male genitalia of *S. liuae* are very similar to those of *S. aokii* NAGATOMI, LIU, TAMAKI and EVENHUIS, 1991 and *S. suzukii* MATSUMURA, 1916 but are distinguished from the latter two by having the characters shown in NAGATOMI *et al.* (1991) [key 10 (couplet 11)].

Among the species from Taiwan, the external characters of *S. liuae* are similar to those of *S. aokii* but are distinguished from the latter by having the following characters: the lateral border of mesonotum (except humeral and postalar calli and a spot just behind humeral callus) dark brown to black, that is, middle lateral yellowish brown spot absent; hind tibia (except apical part) darkened and the larger parts of mid and hind trochanters dark brown to black.

Among the 12 species in NAGATOMI *et al.* (1991), *S. liuae* is characterized as follows: a middle lateral yellowish brown spot (before wing base) is absent on mesonotum.

Figures 1-5 show the whole shape, apical portion of the abdomen and that of the sternum 8 in the female. The dorsum of the male thorax and male genitalia are shown in figs. 171-183 in NAGATOMI *et al.* (1991).

The specimens newly found (6 ♂, 3 ♀) fit the descriptions of the Japanese material (6 ♂) of sp. C in NAGATOMI *et al.* (1991).

Distribution. Taiwan and Japan (Honshu).

Japanese name: Taiwan haraboso tsuriabu. This means a *Systropus* species distributed in Taiwan in addition to Japan. It has been judged by us that 2 ♂ from Taiwan are not separated specifically and subspecifically from 12 ♂, 3 ♀ from Japan. If different unexpectedly, the Japanese name above should be amended.

Holotype: ♀, Oshikiri, Kounan-machi, Saitama Pref., 22. vii. 1994, M. UCHIDA.

Paratypes (6 ♂, 2 ♀): 4 ♂, 1 ♀, same data as holotype; 1 ♂, 1 ♀, Nishifurusato, Ogawa-machi, Saitama Pref., 31. vii. 1997, T. USUI; 1 ♂, Ōasaō, Kumagaya City, Saitama Pref., 27. vii. 1999, N. TAMAKI.

The specimens (8 ♂ from Japan and Taiwan) mentioned as sp. C in NAGATOMI *et al.* (1991) are also designated as paratypes of *S. liuae*.

The holotype (♀) and one paratype (♂) are deposited in National Science Museum, Tokyo. Paratypes are preserved in Bishop Museum, Honolulu, Kagoshima University, Kagoshima and the private collection of one of us (TAMAKI).

This species is dedicated to Dr. Ningwu LIU for her contribution to the study of Bombyliidae.

## Discussion

This species, whose female was unknown in the past, was described and illustrated in NAGATOMI *et al.* (1991) as *Systropus* sp. C. which was thought to be possibly identical with *S. formosanus* (ENDERLEIN, 1926).

One of the most important distinguishing characters in *Systropus* is the shape of apical portion in the female sternum 8 (NAGATOMI *et al.*, 1991; LIU and NAGATOMI, 1992).

HENNIG (1941) treated *S. acuminatus* (ENDERLEIN, 1926) as a synonym of *S. formosanus*.

He wrote, "Die Gestalt der weiblichen Subgenitalplatte ist so variabel, dass ich *acuminatus*, die auf Grund dieses Merkmals von *formosanus* abgetrennt wurde, nicht als eigene Art anerkennes kann." However, the female sternum 8 of *S. acuminatus* is so different in shape from *S. formosanus* that it is very difficult to believe that they are conspecific.

Compare the following statements: ENDERLEIN (1926) on *S. acuminatus*: "Subgenitalplatte des ♀ stark zugespitzt (in Spitze ausgezogen)." ENDERLEIN (1926) on *S. formosanus*: "Subgenitalplatte des ♀ hinten gerade abgestutzt und an den Seitenecken mit je einem zahnartigen, nach hinten überstehenden Fortsatz."

The apical portion of female sternum 8 in *S. liuae* is blackened, not pointed but truncate and without any lateral processes (Fig. 5). Thus, *S. liuae* (distributed in Taiwan and Japan), may easily be separated from *S. acuminatus* and *S. formosanus*, both of which are from Taiwan.

EVENHUIS and GREATHEAD (1999) on *S. formosanus*: "Distribution: Oriental: Taiwan. Palaearctic: Japan." The record from Japan is based on sp. C in NAGATOMI *et al.* (1991). So the record from Japan should be deleted.

According to figs. 3-4 in HENNIG (1941), no significant difference may be seen between *S. formosanus* (so determined by HENNIG, 1941) and *S. liuae* in the shape of gonostylus and cercus (including blackened tubercle). It is not determined whether figures 3-4 by HENNIG (1941) represent *S. formosanus*, *S. acuminatus* or *S. liuae*.

There are many species of *Systropus* from China and Taiwan. The number of species listed in EVENHUIS and GREATHEAD (1999) amounts to 44, of which 14 were described by C. YANG (1995), C. YANG and DU (1991), D. YANG (1998), and D. YANG and C. YANG (1991, 1995, 1997, 1998). For sources of the above literature, see EVENHUIS and GREATHEAD (1999). A thorough revision of the Chinese species is not yet done. However, we venture to name *S. liuae* as new to science.

**Acknowledgments:** We must express our sincere thanks to Messrs. M. UCHIDA and T. USUI for supplying the material examined and to Mr. S. HISAMATSU for his encouragement and help.

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